

# PATENT ABSTRACTS OF JAPAN

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(71)Applicant : KUBOTA CORP

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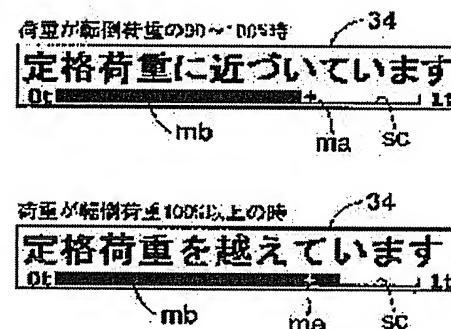
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NISHI EIJI

(54) BACKHOE

(57)Abstract:

**PROBLEM TO BE SOLVED:** To easily recognize a working status at a glance during working while rapidly coping even with the generation of a nonconformity item in a backhoe constituted in a manner that the backhoe can be changed over to an excavation working mode and a crane mode used by working hanging load at the front end of a front device.

**SOLUTION:** In the backhoe having rated load arithmetically operated on the basis of the detected current posture of the front device and a display displaying the detected current hanging load, an analog display section is mounted on a display panel 34 for a display, the backhoe is constituted in such a manner that rated load is displayed by a spot mark ma to an analog scale sc while the hanging load is displayed by a movable mark mb moved along the analog scale sc, and a character display displaying the generation of the nonconformity item resulting from the posture of the front device 9 is executed together with an analog display.



## LEGAL STATUS

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**CLAIMS**

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**[Claim(s)]**

[Claim 1] In the back hoe constituted possible [ a change in the excavation work mode which uses front equipment for the usual excavation work, and the crane mode used hanging at the tip of front equipment and making a load act ] A means to detect the posture of front equipment, and a means for current to hang and to detect a load, The net lifting load calculated based on the current posture of the detected front equipment, While equipping the display panel of said said display with an analog display and expressing a net lifting load as the spot mark to an analog scale for having the display which current [ which was detected ] hangs and displays a load The back hoe characterized by constituting so that it may display by said movable mark which moves a load along with an analog scale by hanging, and constituting so that character representation which displays generating of the fault matter resulting from a posture on front equipment may be performed with said analog display.

[Claim 2] It is the back hoe according to claim 1 characterized by constituting so that it may constitute so that a net lifting load and current may hang together with said analog display and the digital readout of the load may be carried out, if crane mode is started, and it may be carried out by a net lifting load and current hanging the display of generating of said fault matter, and replacing with the digital readout of a load.

[Claim 3] The back hoe according to claim 1 or 2 characterized by constituting so that character representation of the abnormal item may be carried out using the whole display panel, if the abnormalities of sensors occur.

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[Translation done.]



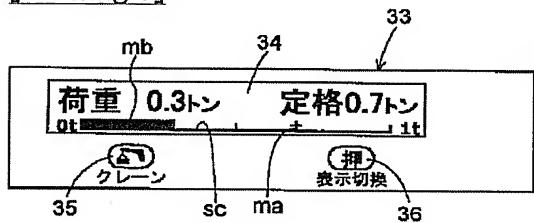
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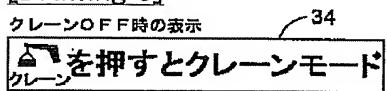
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## DRAWINGS

## [Drawing 7]



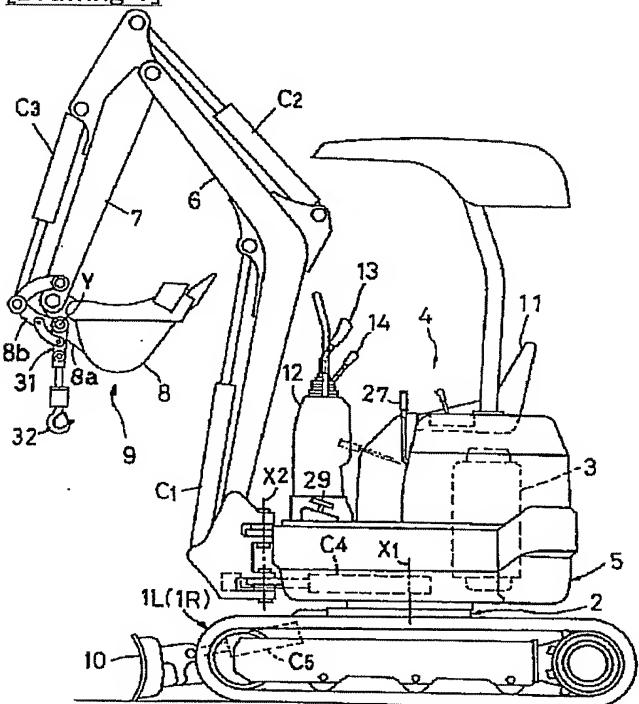
## [Drawing 8]



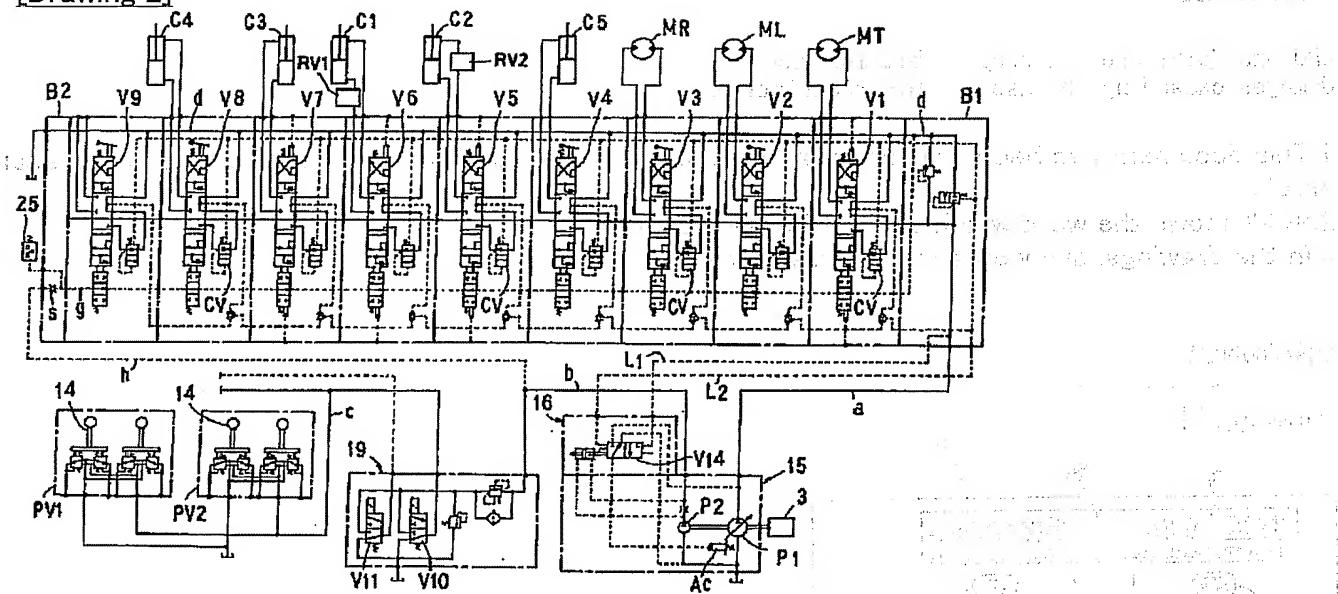
## [Drawing 9]



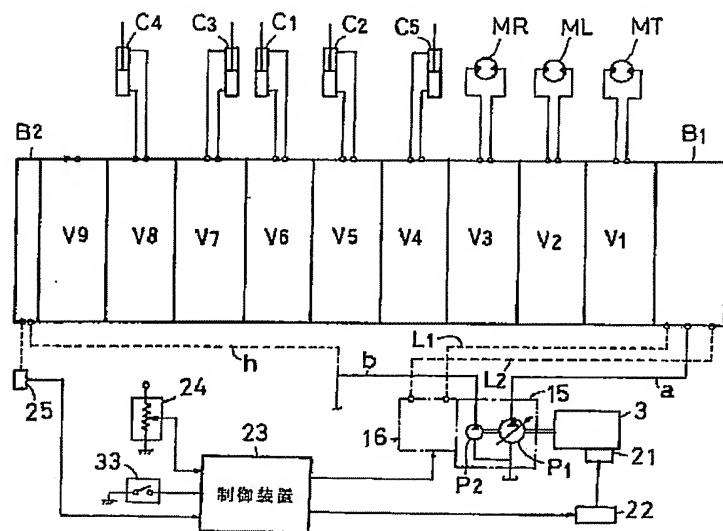
## [Drawing 1]



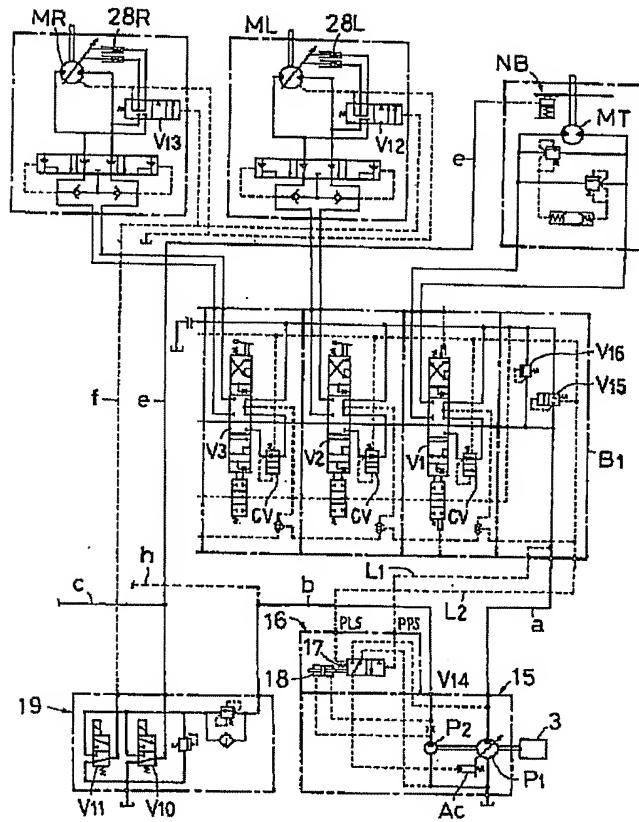
[Drawing 2]



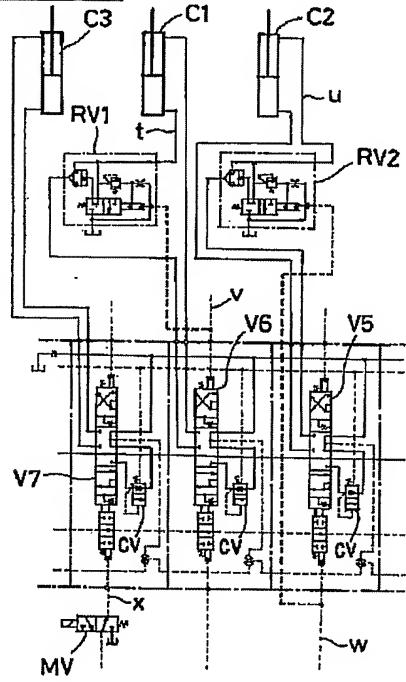
[Drawing 3]



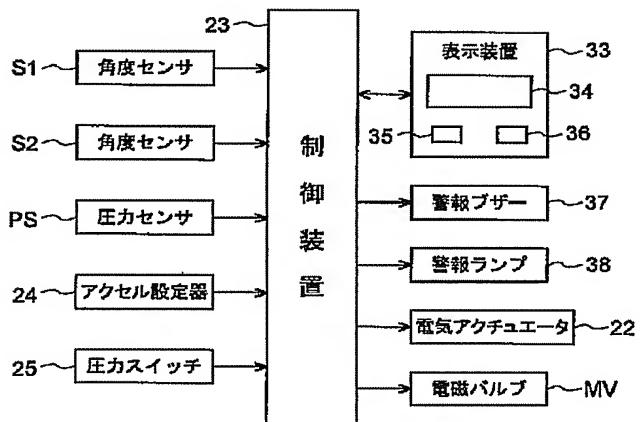
[Drawing 4]



[Drawing 5]



[Drawing 6]

**[Drawing 10]**

(イ) 荷重が転倒荷重の80~100%時 34  
**定格荷重に近づいています**  

 mb ma sc

(ロ) 荷重が転倒荷重100%以上の時 34  
**定格荷重を越えています**  

 mb ma sc

**[Drawing 11]**

(イ) ブームが上げエンドの警告 34  
**ブームを下げて下さい**  

 mb ma sc

(ロ) フックとバケットが干渉する姿勢の警告 34  
**フックが干渉 ブーム下 アームカギに**  

 mb ma sc

(ハ) アームがかき込み付近での警告 34  
**アームを伸ばして下さい**  

 mb ma sc

**[Drawing 12]**

(イ)	アームセンサが異常	～34
	クレーン作業禁止	～34
(ロ)	ブームセンサが異常	～34
	クレーン作業禁止	～34
(ハ)	メータとの通信が異常	
	通信異常	～34
	クレーン作業禁止	～34
(二)	圧力センサが異常	
	ロッド圧力センサ異常	～34
	クレーン作業禁止	～34
(ホ)	圧力センサが異常	
	ボトム圧力センサ異常	～34
	クレーン作業禁止	～34
(ヘ)	電圧が異常	
	過電圧禁止	～34
	クレーン作業禁止	～34
(ト)	メータの内部データが異常	
	クレーンデータ異常	～34
	クレーン作業禁止	～34

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[Translation done.]

